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[54] **HORIZONTAL PLASMA ANTENNA USING PLASMA DRIFT CURRENTS**

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[58] Field of Search **343/701, 721, 343/720; 315/111.21; H01Q 1/26**

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[57]

ABSTRACT

A horizontal plasma antenna is provided. An ionizer generates an ionizing beam through a horizontal tube to form a bounded plasma column extending along a horizontal axis in a gravity field. An amplitude or frequency modulating signal is applied to Helmholtz coils to control a horizontal magnetic field that is perpendicular to the horizontal axis. The resulting changes in the magnetic field produce a drift current in the plasma that, in turn, radiates an amplitude or phase modulated electromagnetic field from the plasma column.

19 Claims, 3 Drawing Sheets

